

Science GE DOK Alignment Chart

PHYSICAL SCIENCE

Grades 3-4

GE 9-14

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Science Concepts	Examples/Practice Items
Enduring Knowledge: All living and non-living things are composed of matter having characteristic properties that distinguish one substance from another.			
DOK 3 PS1(K-4)INQ-1 PS1(K-4)SAE-3	S3-4:9 (DOK 3) Students demonstrate their understanding of the Properties of Matter by... · Investigating and measuring how the total weight of the parts of a substance, no matter how they are combined, remains the same (e.g., water and gravel mixture, or a Lego car system, or the weight of sugar plus the weight of water equals the total weight of the sugar solution) and drawing conclusions from these data.	Science Concepts: a. All matter has weight that can be measured. b. The weight of the whole is the same as the sum of the parts. c. Most objects/substances are made of smaller parts.	
S3-4:10 Not assessed at this grade level.			
S3-4:11 Not assessed at this grade level.			
DOK 2 PS1(K-4)INQ-1 PS1(K-4)SAE-3	S3-4:12 (DOK 2) Students demonstrate their understanding of the States of Matter by... · Identifying , describing, and comparing the properties of selected solids, liquids, and gases .	Science Concepts: a. Solids, liquids and gases are states of matter that can be observed, described, and measured. b. Gases take up as much space as available.	
DOK 2 PS1(K-4)POC-2	S3-4:13 (DOK 2) Students demonstrate their understanding of the Properties of a Gas by... · Experimenting with gas in a closed container (such as a balloon or a bag) and describing how pressure on the container changes when the volume of the gas changes.	Science Concepts: a. Gas is a state of matter that takes up space.	
Enduring Knowledge: A transfer of energy can result in the physical change of state of a substance.			
DOK 3 PS1(K-4)POC-2 PS2(K-4)INQ + SAE-6	S3-4:14 (DOK 3) Students demonstrate their understanding of Physical Change by... · Investigating and explaining what happens to liquids in open containers.	Science Concepts: a. Adding heat can change a substance from a solid, to a liquid, to a gas .	

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PHYSICAL SCIENCE

Grades 3-4

GE 15-22

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Science Concepts	Examples/Practice Items
	Enduring Knowledge: When matter undergoes a chemical change it turns into a new and different substance whose properties are different from the original. No matter how substances interact with one another, the total mass of the system remains the same.		
	S3-4:15 Not assessed at this grade level		
	S3-4:16 Not assessed at this grade level.		
	Enduring Knowledge: The nucleus of some atoms is unstable and may spontaneously decay.		
	S3-4:17 Not assessed at this grade level.		
	S3-4:18 Not assessed at this grade level.		
	Enduring Knowledge: Everything is constantly moving; motion is relative, but the motion of an object can be described and predicted by tracing and measuring its position over time.		
	S3-4:19 Not assessed at this grade level.		
	S3-4:20 Not assessed at this grade level.		
	Enduring Knowledge (Force): Force is an influence that can change the motion of an object.		
DOK 2 PS3(K-4)INQ + SAE-7	S3-4:21 (DOK 2) Students demonstrate their understanding of Force by... · Investigating and describing how different amounts of force can change the position or direction of motion of an object	Science Concepts: a. Changes in position or direction of motion are caused by forces . b. The greater the force , the greater the change.	
	S3-4:22 Not assessed at this grade level.		

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Science Concepts	Examples/Practice Items
Enduring Knowledge: Energy is necessary for change to occur. It is the ability of matter to bring about change. *There are many forms of energy. *The total energy in the universe is constant. *Energy can be transformed and transferred, but not destroyed (Conservation of Energy). *Energy transfers and transformations exhibit the characteristics of systems with inputs, processes and outputs, as well as connections to other systems.			
S3-4:23 Not assessed at this grade level.			
DOK 2 PS2(K-4)SAE-4 DOK 2	S3-4:24 (DOK 2) Students demonstrate their understanding of Electrical Energy by... · Building circuits, drawing diagrams of these electric circuits , and predicting whether electricity flows or will not flow through the circuit. AND · Using experimental data to classify different materials as conductors and insulators .	Science Concepts: a. A complete loop is needed through which an electric charge can flow. b. Batteries are a source of electrical energy . c. Electric circuits can produce light, run motors, and create sounds. d. Certain materials are conductors of electricity. Non-conductors of electricity are called insulators .	
DOK 2 PS3(K-4)INQ + SAE-8	S3-4:25 (DOK 2) Students demonstrate their understanding of Magnetism by... · Describing what happens when like and opposite poles of magnets are placed near each other.	Science Concepts: a. Magnets have opposite charged poles . b. When the same poles of magnets are placed near each other, they repel . c. When the opposite poles of magnets are placed near each other, they attract .	
S3-4:26 Not assessed at this grade level.			
S3-4:27 Not assessed at this grade level.			
DOK 2 PS2(K-4)INQ + SAE-6 DOK 2 PS2(K-4)SAE-5	S3-4:28 (DOK 2) Students demonstrate their understanding of Light Energy by... · Investigating with flashlights as well as other light sources and describing how light rays reflect off of objects. AND · Explaining what occurs when light rays are blocked (e.g., shadows).	Science Concepts: a. Light maintains direction of motion until it interacts with another object. b. Light can be reflected or absorbed .	
S3-4:29 Not assessed at this grade level.			